

ABB retrofit to reduce energy consumption of mining equipment by 20%

ABB's AC drives retrofit will enhance life cycle and increase energy efficiency of an electric mining shovel

Baden, Switzerland, September 24, 2012 - ABB, the leading power and automation technology group, jointly with Joy Global, the leading mining equipment supplier, have been awarded a shovel retrofit project from the largest merchant coke producer in the US. The rebuild will boost the life expectancy of the electric mining shovel and significantly reduce its energy consumption, up to 20% after the retrofit.

The mechanical components of open-pit mining machinery often remain in good shape for more than 20 years. But the life span of the associated electrical equipment is usually exhausted by that time. ABB's drives and controls retrofit can enhance the operating time of the BE395BI shovel for about 10 years. To achieve these results, ABB will replace the obsolete drives system and relay controls of the shovel with a highly efficient solution utilizing ACS800 drives for mining, operator controls and an AC800M controller.

The project was awarded thanks to the state-of-the-art technology from ABB, the mining machinery field expertise from Joy Global Services as well as the ability to execute the engineering and delivery of the equipment within a tight timeframe.

The new drives system will lead to significantly higher productivity through the use of ABB's sophisticated Direct Torque Control (DTC) that provides best-in-class drive dynamics and torque control to reach a more responsive operation. Additionally, the original drive system with large brake choppers will be replaced with modern regenerative drives.

"We are very pleased to work with ABB on this project," said Scott Ottesen, Joy Global. "Our cooperation is efficient and smooth and the state-of-the-art solutions deliver impressive results to our customer. We are convinced that retrofits are a very cost effective way to maintain the life cycle and productivity of our mining equipment."

The coal industry faces a lot of challenges today. Due to the increasing environmental awareness and the request for alternative sources coal producers have to improve and optimize their processes. This is one of the reasons why retrofits of mining equipment are requested more frequently. Joy Global choose the cooperation with ABB since ABB's retrofit solutions are among the best in the market. Its solution for the BE395BI shovel will increase productivity and achieve a reduction of energy consumption up to 20%.

ABB (www.abb.com) is a leader in power and automation technologies that enable utility and industry customers to improve their performance while lowering environmental impact. The ABB Group of companies operates in around 100 countries and employs about 145,000 people.

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Press Release



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